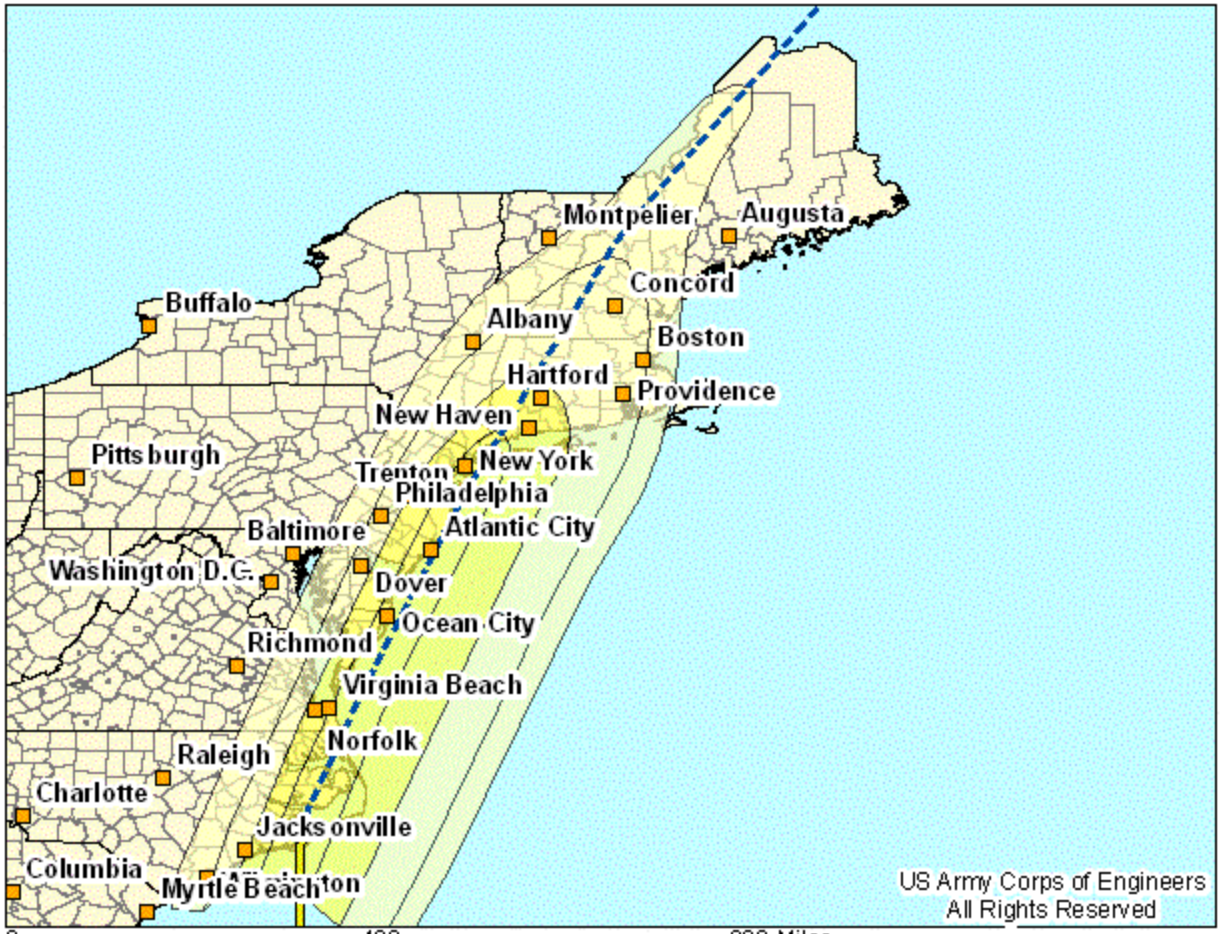
US Army Corps of Engineers

Hurricane Irene Projected Damage Areas

Landfall Plus About 3 Hours

For Planning Purposes Only!



Post Landfall Projected Damage Areas

This model is based on a Category 1 storm making landfall on the Outer Banks, NC.

Forecast Track

Historic Track

Projected Damage Areas

- CAT 0-type damage
- CAT 1-type damage
- CAT 2-type damage
- CAT 3-type damage
- CAT 4-type damage
- CAT 5-type damage

Information provided on this page displays a projected or actual Category 1 storm making landfall on the Outer Banks, NC. These projections are based on information from the NHC (1100 EDT 08/27/2011) forecast and extrapolated by LRL staff to represent a landfall condition that has either occurred or may occur in the near future.

Details about this model may be obtained at http://www.englink.usace.army.mil or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

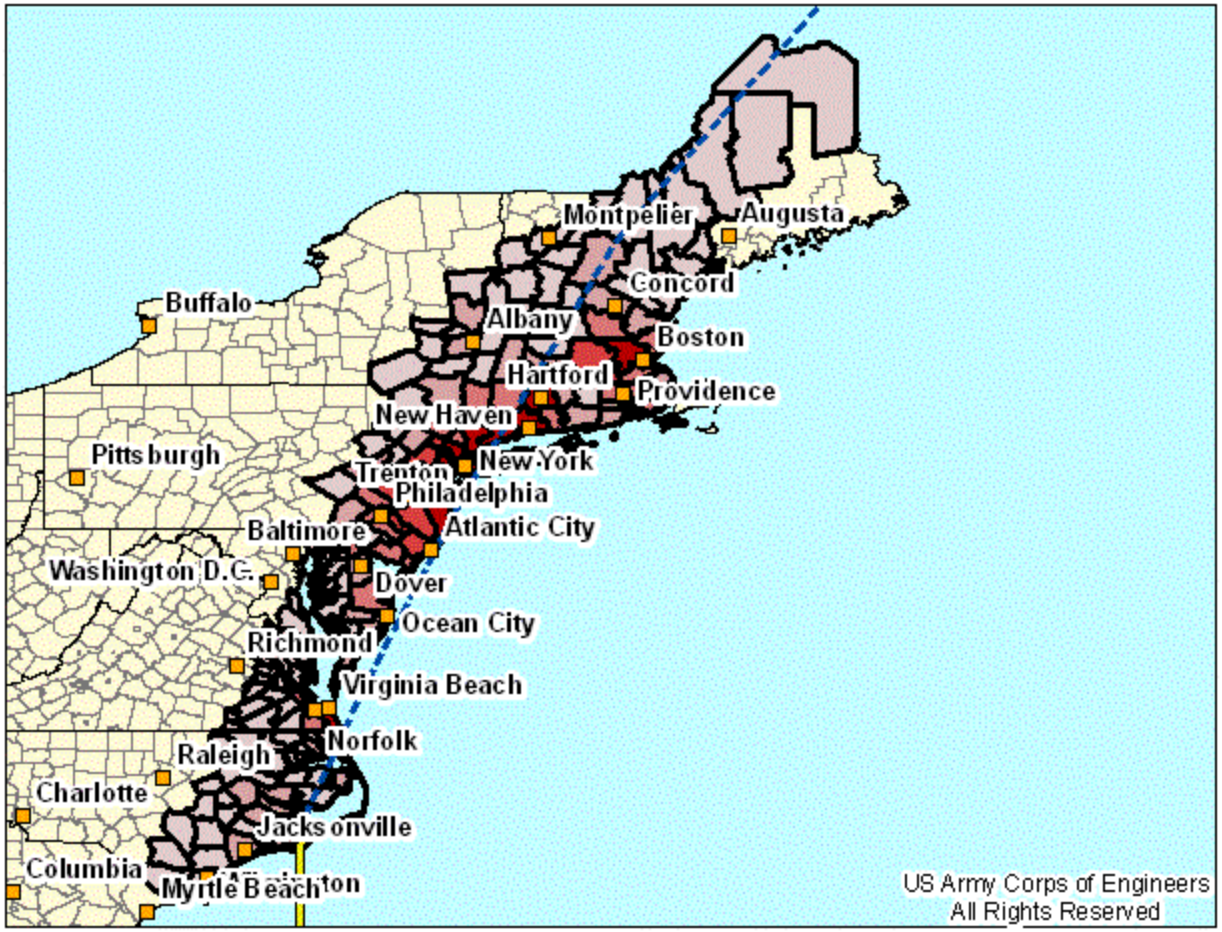
Hurricane Irene Projected Damage Areas	
Generated By: Siemsen, LRL 1100 EDT 08/27/2011	
Sources: HURREVAC LRL-DEBRIS	Page 1 of 27

US Army Corps of Engineers

Hurricane Irene Debris Model

Landfall Plus About 3 Hours

For Planning Purposes Only!



Post Landfall Debris Model Results

New York - 20,305,000 Yards
New Jersey - 17,425,000 Yards
Connecticut - 5,328,000 Yards
Massachusetts - 3,935,000 Yards
Virginia - 3,338,000 Yards
Pennsylvania - 3,022,000 Yards
North Carolina - 2,171,000 Yards
New Hampshire - 1,100,000 Yards
Delaware - 906,000 Yards
Rhode Island - 812,000 Yards
Maryland - 681,000 Yards
Vermont - 332,000 Yards
Maine - 110,000 Yards

Model results per County on following page

This model is based on a Category 1 storm making landfall on the Outer Banks, NC.

Forecast Track
Historic Track

Debris

- < 100,000 cubic yards
- 100,000 - 249,999 cubic yards
- 250,000 - 499,999 cubic yards
- 500,000 - 999,999 cubic yards
- >1,000,000 cubic yards

Information provided on this page displays a Category 1 storm making landfall on the Outer Banks, NC. These projections are based on information from the NHC (1100 EDT 08/27/2011) forecast. The amount of debris forecasted is possible total volume, not necessarily the volume that may need to be removed with Federal funds, but does not include volume that may be covered by private insurance. Debris volume may include storm surge generated debris.

Details about this model may be obtained at http://www.englink.usace.army.mil or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Hurricane Irene Debris Model

Generated By:
Siemsen, LRL 1100 EDT 08/27/2011

Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane Irene Debris Model

Landfall Plus About 3 Hours

For Planning Purposes Only!

State	Yards per State	County	Yards per County
Connecticut		Fairfield County	1,613,000
		Hartford County	1,288,000
		Litchfield County	355,000
		Middlesex County	342,000
		New Haven County	1,276,000
		New London County	225,000
		Tolland County	129,000
		Windham County	100,000
Connecticut	5,328,000		
Delaware		Kent County	155,000
		New Castle County	270,000
		Sussex County	481,000
Delaware	906,000		
Maine		Androscoggin County	< 1,000
		Aroostook County	< 1,000
		Cumberland County	15,000
		Franklin County	5,000
		Oxford County	26,000
		Piscataquis County	< 1,000
		Somerset County	< 1,000
		York County	65,000
Maine	111,000		
Maryland		Calvert County	27,000
		Caroline County	28,000
		Cecil County	41,000
		Dorchester County	31,000
		Harford County	2,000
		Kent County	11,000

State	Yards per State	County	Yards per County
Maryland		Queen Anne's County	25,000
(continued)		Somerset County	51,000
		St. Mary's County	60,000
		Talbot County	24,000
		Wicomico County	188,000
		Worcester County	193,000
Maryland	681,000		
Massachusetts		Berkshire County	124,000
		Bristol County	293,000
		Dukes County	< 1,000
		Essex County	358,000
		Franklin County	69,000
		Hampden County	384,000
		Hampshire County	116,000
		Middlesex County	1,040,000
		Norfolk County	390,000
		Plymouth County	181,000
		Suffolk County	309,000
		Worcester County	671,000
Massachusetts	3,935,000		
New Hampshire		Belknap County	65,000
		Carroll County	49,000
		Cheshire County	80,000
		Coos County	32,000
		Grafton County	113,000
		Hillsborough County	311,000
		Merrimack County	148,000

The amount of debris forecasted is possible total volume, not necessarily the volume that may need to be removed with Federal funds, but does not include volume that may be covered by private insurance. Debris volume may include storm surge generated debris.

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Source: US Army Corps of Engineers, All Rights Reserved

Hurricane Irene Debris Model

Generated By:
Siemsen, LRL 1100 EDT 08/27/2011

Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane Irene Debris Model

Landfall Plus About 3 Hours

For Planning Purposes Only!

State	Yards per State	County	Yards per County
New Hampshire		Rockingham County	199,000
(continued)		Strafford County	57,000
		Sullivan County	46,000
New Hampshire	1,100,000		
New Jersey		Atlantic County	813,000
		Bergen County	1,871,000
		Burlington County	859,000
		Camden County	714,000
		Cape May County	331,000
		Cumberland County	283,000
		Essex County	1,332,000
		Gloucester County	372,000
		Hudson County	997,000
		Hunterdon County	127,000
		Mercer County	680,000
		Middlesex County	1,567,000
		Monmouth County	2,008,000
		Morris County	666,000
		Ocean County	2,132,000
		Passaic County	823,000
		Salem County	74,000
		Somerset County	544,000
		Sussex County	136,000
		Union County	1,025,000
		Warren County	71,000
New Jersey	17,425,000		
New York		Albany County	145,000
		Bronx County	1,456,000
		Columbia County	64,000

State	Yards per State	County	Yards per County
New York		Delaware County	5,000
(continued)		Dutchess County	254,000
		Greene County	42,000
		Kings County	3,533,000
		Montgomery County	< 1,000
		Nassau County	2,952,000
		New York County	1,654,000
		Orange County	265,000
		Putnam County	148,000
		Queens County	3,719,000
		Rensselaer County	91,000
		Richmond County	882,000
		Rockland County	397,000
		Saratoga County	107,000
		Schenectady County	74,000
		Schoharie County	5,000
		Suffolk County	2,674,000
		Sullivan County	40,000
		Ulster County	171,000
		Warren County	25,000
		Washington County	32,000
		Westchester County	1,570,000
New York	20,305,000		
North Carolina		Beaufort County	109,000
		Bertie County	36,000
		Bladen County	2,000
		Brunswick County	83,000
		Camden County	33,000

The amount of debris forecasted is possible total volume, not necessarily the volume that may need to be removed with Federal funds, but does not include volume that may be covered by private insurance. Debris volume may include storm surge generated debris.

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Source: US Army Corps of Engineers, All Rights Reserved

Hurricane Irene Debris Model

Generated By:
Siemsen, LRL 1100 EDT 08/27/2011

Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane Irene Debris Model

Landfall Plus About 3 Hours

For Planning Purposes Only!

State	Yards per State	County	Yards per County
North Carolina		Carteret County	248,000
(continued)		Chowan County	34,000
		Columbus County	5,000
		Craven County	244,000
		Currituck County	82,000
		Dare County	128,000
		Duplin County	34,000
		Edgecombe County	20,000
		Gates County	21,000
		Greene County	10,000
		Halifax County	7,000
		Hertford County	25,000
		Hyde County	37,000
		Jones County	23,000
		Lenoir County	35,000
		Martin County	29,000
		New Hanover County	198,000
		Northampton County	10,000
		Onslow County	216,000
		Pamlico County	50,000
		Pasquotank County	125,000
		Pender County	54,000
		Perquimans County	36,000
		Pitt County	126,000
		Sampson County	3,000
		Tyrrell County	25,000
		Washington County	42,000
		Wayne County	36,000
		Wilson County	5,000
North Carolina	2,171,000		

State	Yards per State	County	Yards per County
Pennsylvania		Berks County	11,000
		Bucks County	520,000
		Chester County	177,000
		Delaware County	384,000
		Lehigh County	104,000
		Monroe County	39,000
		Montgomery County	459,000
		Northampton County	116,000
		Philadelphia County	1,186,000
		Pike County	26,000
Pennsylvania	3,022,000		
Rhode Island		Bristol County	46,000
		Kent County	141,000
		Newport County	69,000
		Providence County	448,000
		Washington County	108,000
Rhode Island	812,000		
Vermont		Addison County	2,000
		Bennington County	50,000
		Caledonia County	18,000
		Essex County	5,000
		Orange County	23,000
		Rutland County	48,000
		Washington County	16,000
		Windham County	85,000
		Windsor County	85,000
Vermont	332,000		

The amount of debris forecasted is possible total volume, not necessarily the volume that may need to be removed with Federal funds, but does not include volume that may be covered by private insurance. Debris volume may include storm surge generated debris.

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Source: US Army Corps of Engineers, All Rights Reserved

Hurricane Irene Debris Model

Generated By:
Siemsen, LRL 1100 EDT 08/27/2011

Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane Irene Debris Model

Landfall Plus About 3 Hours

For Planning Purposes Only!

State	Yards per State	County	Yards per County
Virginia		Accomack County	106,000
		Charles City County	3,000
		Chesapeake city	457,000
		Essex County	3,000
		Franklin city	6,000
		Gloucester County	44,000
		Greensville County	< 1,000
		Hampton city	215,000
		Isle of Wight County	42,000
		James City County	52,000
		King William County	3,000
		King and Queen County	4,000
		Lancaster County	12,000
		Mathews County	13,000
		Middlesex County	12,000
		New Kent County	5,000
		Newport News city	281,000
		Norfolk city	501,000
		Northampton County	29,000
		Northumberland County	13,000
		Poquoson city	14,000
		Portsmouth city	280,000
		Prince George County	3,000
		Richmond County	4,000
		Southampton County	13,000
		Suffolk city	98,000
		Surry County	7,000
		Sussex County	6,000
		Virginia Beach city	1,040,000
		Westmoreland County	5,000
		Williamsburg city	7,000

State	Yards per State	County	Yards per County
Virginia		York County	60,000
Virginia	3,338,000		

The amount of debris forecasted is possible total volume, not necessarily the volume that may need to be removed with Federal funds, but does not include volume that may be covered by private insurance. Debris volume may include storm surge generated debris.

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Source: US Army Corps of Engineers, All Rights Reserved

Hurricane Irene Debris Model

Generated By:
Siemsen, LRL 1100 EDT 08/27/2011

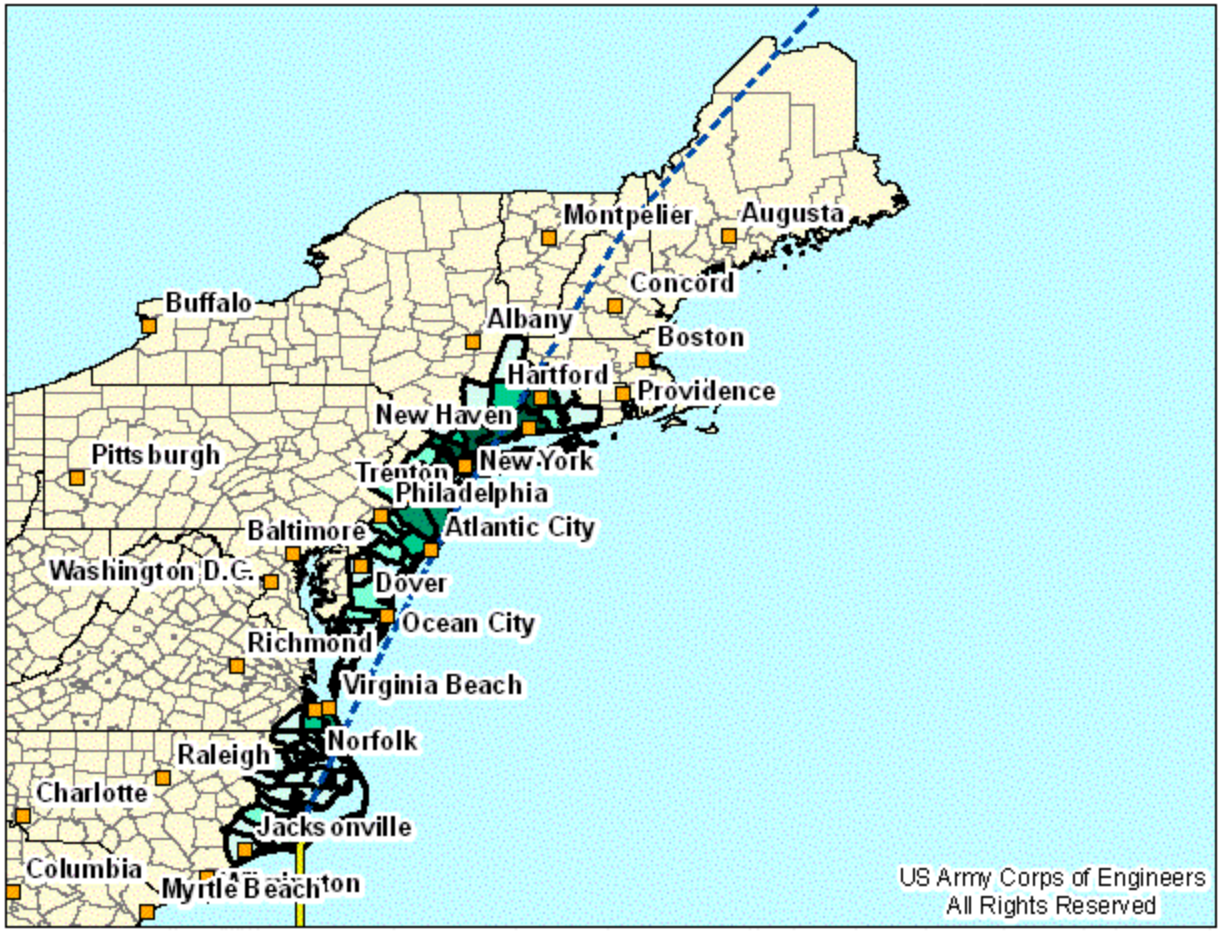
Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane Irene Commodities Model

Landfall Plus About 3 Hours

For Planning Purposes Only!



Post Landfall Water Model Results

Day One / Day Two / Day Three

New York – 185/370/746 Truckloads
New Jersey – 105/210/421 Truckloads
Connecticut – 45/90/177 Truckloads
Virginia – 18/36/73 Truckloads
North Carolina – 8/16/33 Truckloads
Maryland – 3/6/11 Truckloads
Delaware – 3/6/11 Truckloads
Pennsylvania – 2/3/5 Truckloads
Massachusetts – 1/2/4 Truckloads

Model results per County on following page

This model is based on a Category 1 storm making landfall on the Outer Banks, NC.

Forecast Track
Historic Track

Commodities

- < 5 Trucks Each
- 5 - 10 Trucks Each
- 11 - 20 Trucks Each
- 21 - 40 Trucks Each
- > 40 Trucks Each

Information provided on this page displays a Category 1 storm making landfall on the Outer Banks, NC. These projections are based on information from the NHC ***(1100 EDT 08/27/2011)*** forecast. The amount of commodities forecasted is based on Mission Guide Book requirements and SME input. The graphic represents daily needs with a ramp-up in the distribution system – three days for Points of Distribution (PODs) to be fully in place and operational. Volume shown is for each commodity – water and ice. Commodity need may be supplied by multiple agencies and/or sources.

Details about this model may be obtained at http://www.englink.usace.army.mil
or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Hurricane Irene Commodities Model	
Generated By: Siemsen, LRL 1100 EDT 08/27/2011	
Sources: HURREVAC LRL-DEBRIS	

US Army Corps of Engineers

Hurricane Irene Commodities Model

Landfall Plus About 3 Hours

For Planning Purposes Only!

State	Truckloads per State	County	Truckloads per County
Connecticut		Fairfield County	54
		Hartford County	50
		Litchfield County	11
		Middlesex County	10
		New Haven County	50
		New London County	1
		Tolland County	1
Connecticut	177		
Delaware		Kent County	1
		Sussex County	10
Delaware	11		
Maryland		Somerset County	2
		Wicomico County	6
		Worcester County	3
Maryland	11		
Massachusetts		Berkshire County	1
		Hampden County	3
Massachusetts	4		
New Jersey		Atlantic County	16
		Bergen County	53
		Burlington County	21
		Camden County	10
		Cape May County	6
		Cumberland County	8
		Essex County	46
		Gloucester County	5
		Hudson County	36
New Jersey (continued)		Mercer County	20
		Middlesex County	47
		Monmouth County	38
		Morris County	10
		Ocean County	34
		Passaic County	26
		Salem County	1
		Somerset County	13
		Union County	31
New Jersey	421		
New York		Bronx County	82
		Dutchess County	3
		Kings County	149
		Nassau County	80
		New York County	95
		Orange County	1
		Putnam County	6
		Queens County	138
		Richmond County	29
		Rockland County	18
		Suffolk County	88
		Westchester County	57
New York	746		
North Carolina		Beaufort County	2
		Bertie County	1
		Camden County	1
		Carteret County	4

Source: US Army Corps of Engineers, All Rights Reserved

The amount of commodities forecasted is based on Mission Guide Book requirements and SME input and the above table indicates suggested daily needs based on full deployment of a commodities distribution system. Volume shown is for each commodity – water and ice. Commodity need may be supplied by multiple agencies and/or sources.

Details about this model may be obtained at http://www.englink.usace.army.mil
or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Hurricane Irene Commodities Model

Generated By:
Siemsen, LRL 1100 EDT 08/27/2011

Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane Irene Commodities Model

Landfall Plus About 3 Hours

For Planning Purposes Only!

State	Truckloads per State	County	Truckloads per County
North Carolina		Chowan County	1
(continued)		Craven County	5
		Currituck County	2
		Dare County	3
		Gates County	1
		Hyde County	1
		Jones County	1
		Martin County	1
		Onslow County	3
		Pamlico County	1
		Pasquotank County	3
		Perquimans County	1
		Tyrrell County	1
		Washington County	1
North Carolina	33		
Pennsylvania		Bucks County	5
Pennsylvania	5		
Virginia		Accomack County	3
		Chesapeake city	14
		Hampton city	4
		Norfolk city	15
		Northampton County	1
		Poquoson city	1
		Portsmouth city	8
		Suffolk city	1
		Virginia Beach city	26
Virginia	73		

Source: US Army Corps of Engineers, All Rights Reserved

The amount of commodities forecasted is based on Mission Guide Book requirements and SME input and the above table indicates suggested daily needs based on full deployment of a commodities distribution system. Volume shown is for each commodity – water and ice. Commodity need may be supplied by multiple agencies and/or sources.

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or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Hurricane Irene Commodities Model

Generated By:
Siemsen, LRL 1100 EDT 08/27/2011

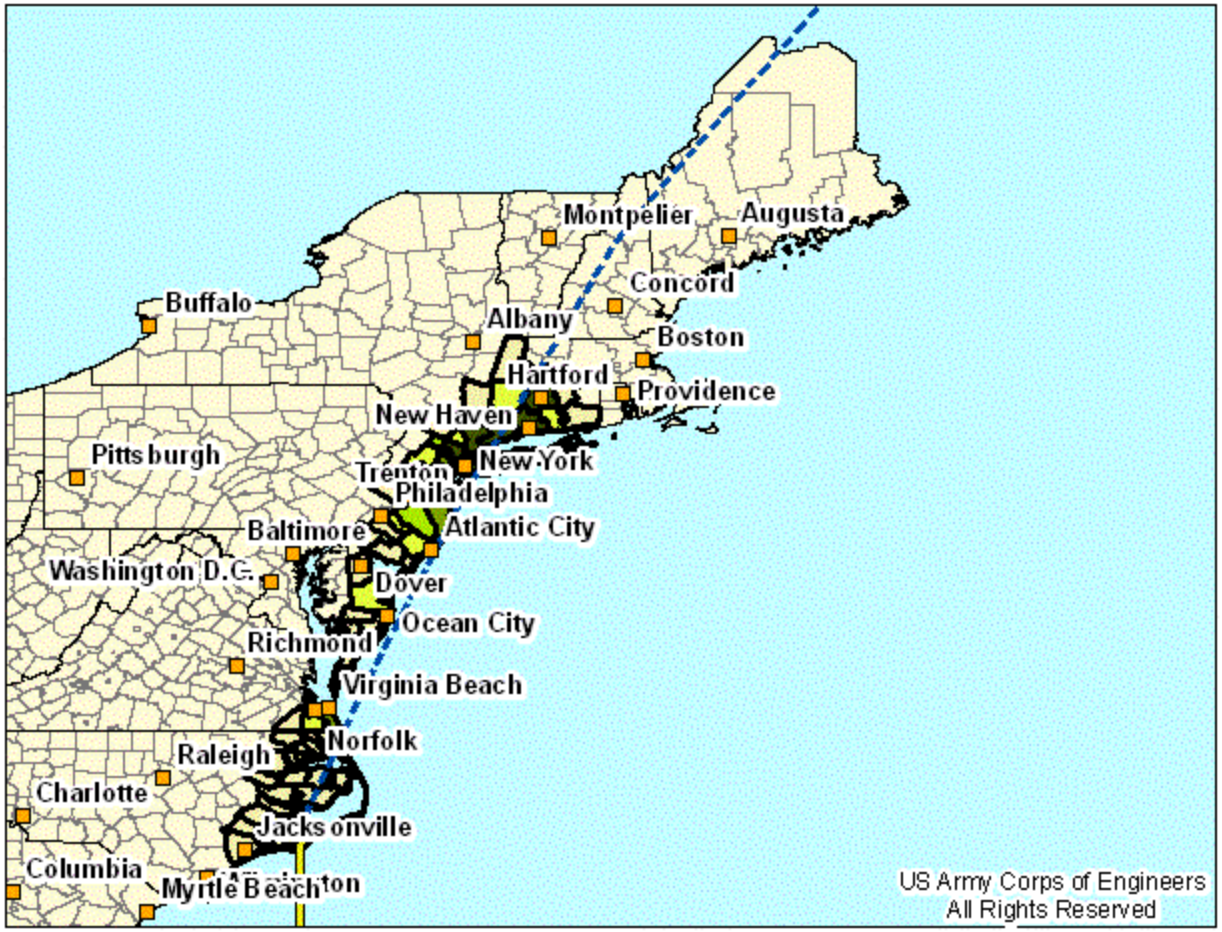
Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane Irene Temporary Roofing Model

Landfall Plus About 3 Hours

For Planning Purposes Only!



Post Landfall Temporary Roofing Model Results

New York - 106,400
New Jersey - 91,300
Connecticut - 41,100
Virginia - 16,600
North Carolina - 6,900
Maryland - 2,800
Delaware - 2,500
Pennsylvania - 1,200
Massachusetts - 600

Model results per County on following page

This model is based on a Category 1 storm making landfall on the Outer Banks, NC.

Forecast Track
Historic Track

Temporary Roofing

- < 2,000 units
- 2,000 - 3,999 units
- 4,000 - 5,999 units
- 6,000 - 9,999 units
- > 10,000 units

Information provided on this page displays a Category 1 storm making landfall on the Outer Banks, NC. These projections are based on information from the NHC (1100 EDT 08/27/2011) forecast. Temporary roofing is based on 5% in CAT 1.

Details about this model may be obtained at http://www.englink.usace.army.mil or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Hurricane Irene Roofing Model

Generated By:
Siemsen, LRL 1100 EDT 08/27/2011

Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane Irene Temporary Roofing Model

Landfall Plus About 3 Hours

For Planning Purposes Only!

State	House Units per State	County	House Units per County
Connecticut		Fairfield County	12,200
		Hartford County	11,200
		Litchfield County	3,100
		Middlesex County	2,600
		New Haven County	11,500
		New London County	200
		Tolland County	300
Connecticut	41,100		
Delaware		Kent County	200
		Sussex County	2,300
Delaware	2,500		
Maryland		Somerset County	400
		Wicomico County	1,300
		Worcester County	1,100
Maryland	2,800		
Massachusetts		Berkshire County	< 100
		Hampden County	600
Massachusetts	600		
New Jersey		Atlantic County	3,800
		Bergen County	12,400
		Burlington County	5,000
		Camden County	2,400
		Cape May County	1,600
		Cumberland County	1,700
		Essex County	7,500
		Gloucester County	1,100
		Hudson County	4,500

State	House Units per State	County	House Units per County
New Jersey		Mercer County	4,500
(continued)		Middlesex County	10,300
		Monmouth County	9,200
		Morris County	2,400
		Ocean County	10,000
		Passaic County	5,100
		Salem County	< 100
		Somerset County	3,100
		Union County	6,700
New Jersey	91,300		
New York		Bronx County	4,600
		Dutchess County	600
		Kings County	15,000
		Nassau County	19,900
		New York County	800
		Orange County	< 100
		Putnam County	1,500
		Queens County	20,900
		Richmond County	7,200
		Rockland County	3,600
		Suffolk County	21,900
		Westchester County	10,400
New York	106,400		
North Carolina		Beaufort County	400
		Bertie County	< 100
		Camden County	200
		Carteret County	1,400

Temporary roofing is based on 5% in CAT 1.

Details about this model may be obtained at http://www.englink.usace.army.mil
or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Source: US Army Corps of Engineers, All Rights Reserved

Hurricane Irene Roofing Model

Generated By:
Siemsen, LRL 1100 EDT 08/27/2011

Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane Irene Temporary Roofing Model

Landfall Plus About 3 Hours

For Planning Purposes Only!

State	House Units per State	County	House Units per County
North Carolina		Chowan County	300
(continued)		Craven County	1,200
		Currituck County	500
		Dare County	800
		Gates County	< 100
		Hyde County	< 100
		Jones County	< 100
		Martin County	< 100
		Onslow County	400
		Pamlico County	300
		Pasquotank County	800
		Perquimans County	300
		Tyrrell County	< 100
		Washington County	300
North Carolina	6,900		
Pennsylvania		Bucks County	1,200
Pennsylvania	1,200		
Virginia		Accomack County	800
		Chesapeake city	3,400
		Hampton city	800
		Norfolk city	3,000
		Northampton County	300
		Poquoson city	< 100
		Portsmouth city	1,900
		Suffolk city	< 100
		Virginia Beach city	6,400
Virginia	16,600		

Temporary roofing is based on 5% in CAT 1.

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or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Source: US Army Corps of Engineers, All Rights Reserved

Hurricane Irene Roofing Model

Generated By:
Siemsen, LRL 1100 EDT 08/27/2011

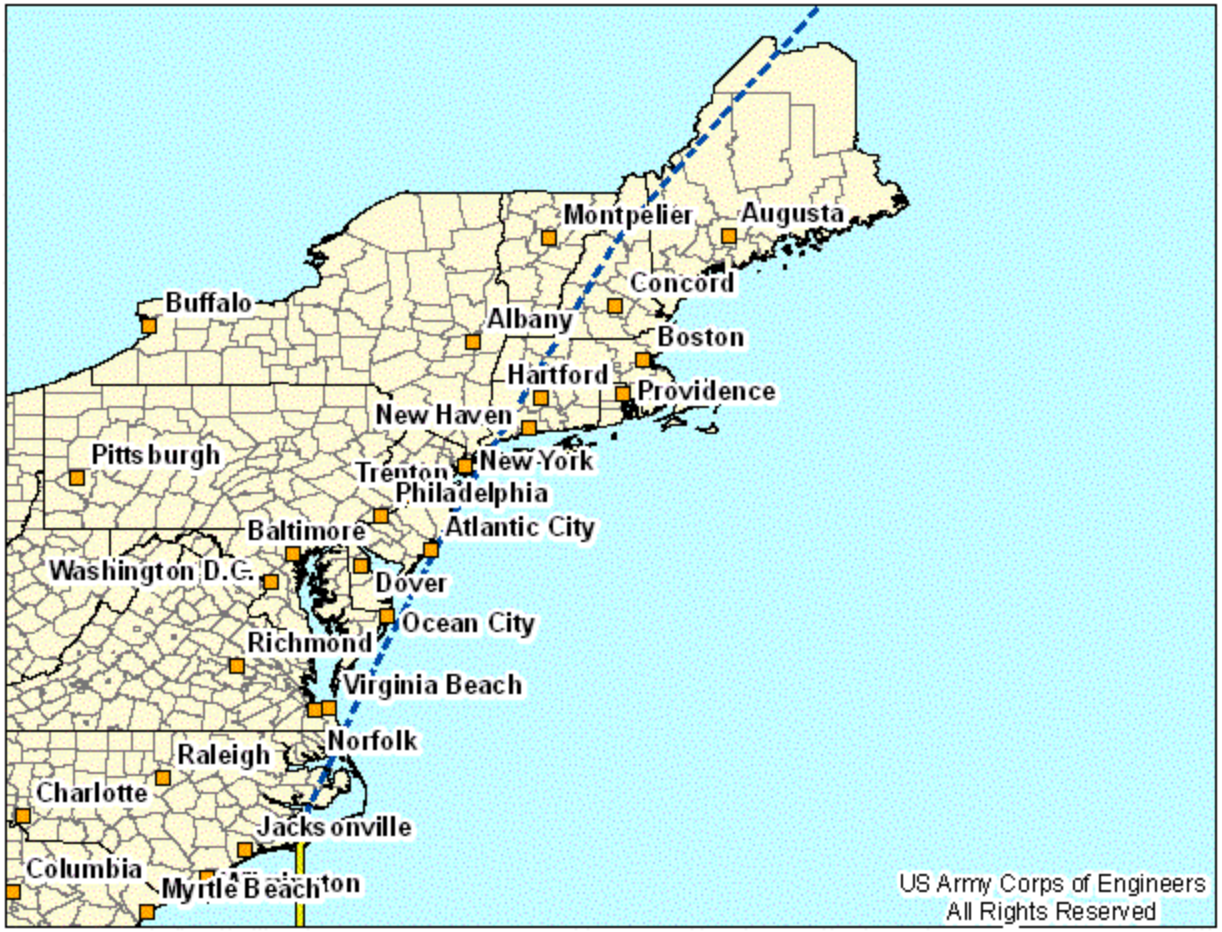
Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane Irene Temporary Housing Model

Landfall Plus About 3 Hours

For Planning Purposes Only!



0 400 800 Miles

Post Landfall Temporary Housing Model Results

No significant Temporary Housing need expected

Model results per County on following page

This model is based on a Category 1 storm making landfall on the Outer Banks, NC.

Forecast Track
Historic Track

Temporary Housing

- < 2,000 units
- 2,000 - 3,999 units
- 4,000 - 5,999 units
- 6,000 - 9,999 units
- > 10,000 units

Information provided on this page displays a Category 1 storm making landfall on the Outer Banks, NC. These projections are based on information from the NHC (1100 EDT 08/27/2011) forecast. Temporary housing is based on nothing. The number indicated represents a possible need but not necessarily the scope of mission for USACE.

Details about this model may be obtained at http://www.englink.usace.army.mil or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Hurricane Irene Housing Model	
Generated By: Siemsen, LRL 1100 EDT 08/27/2011	
Sources: HURREVAC LRL-DEBRIS	Page 13 of 27

US Army Corps of Engineers

Hurricane Irene Temporary Housing Model

Landfall Plus About 3 Hours

For Planning Purposes Only!

State	House Units per State	County	House Units per County

Temporary housing is based on nothing.
The number indicated represents a possible need but not necessarily the scope of mission for USACE.

Details about this model may be obtained at http://www.englink.usace.army.mil
or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Source: US Army Corps of Engineers, All Rights Reserved

Hurricane Irene Housing Model

Generated By:
Siemsen, LRL 1100 EDT 08/27/2011

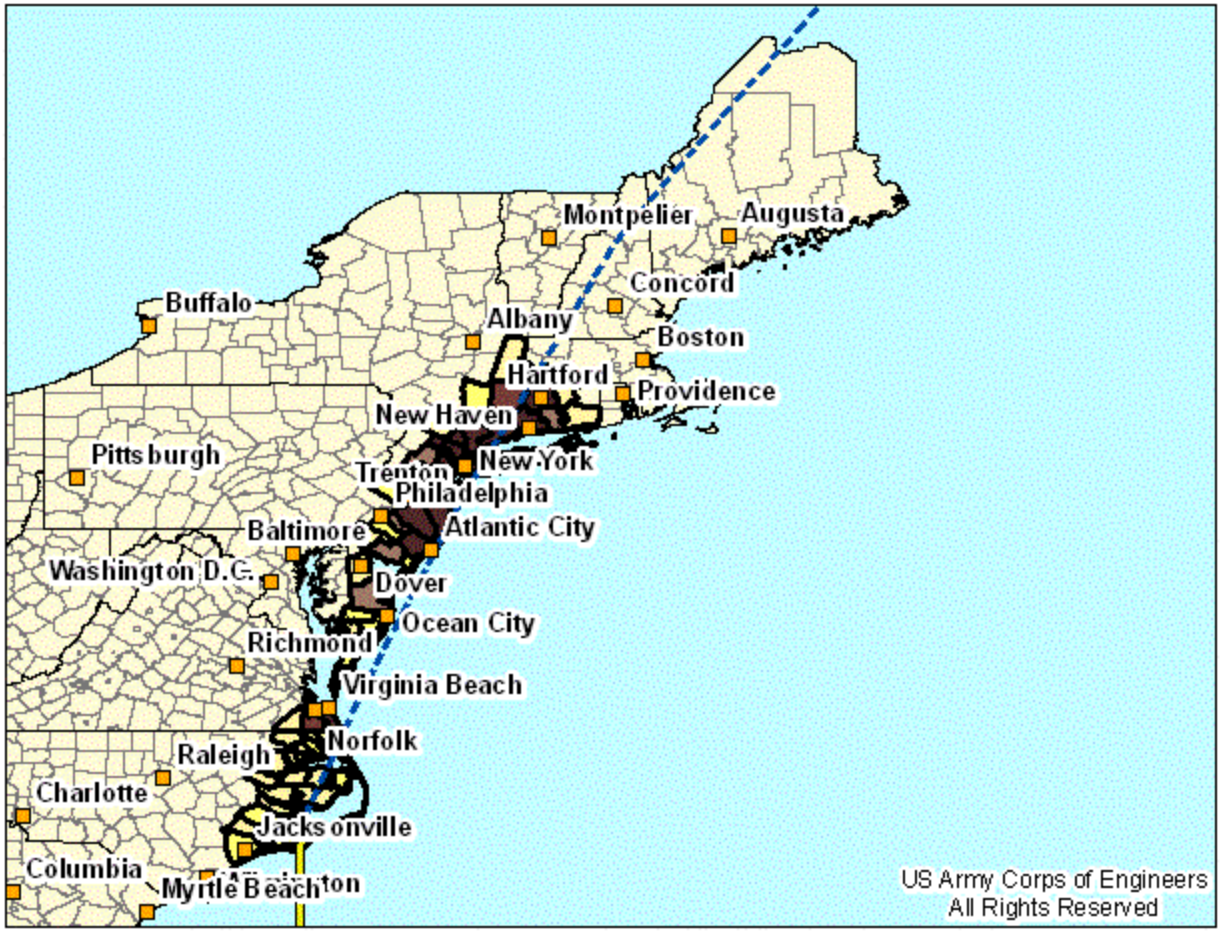
Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane Irene Population Model

Landfall Plus About 3 Hours

For Planning Purposes Only!



Post Landfall Population Model Results

New York - 12,667,000
New Jersey - 7,063,000
Connecticut - 2,981,000
Virginia - 1,167,000
North Carolina - 407,000
Delaware - 177,000
Maryland - 160,000
Pennsylvania - 73,000
Massachusetts - 39,000

Model results per County on following page

This model is based on a Category 1 storm making landfall on the Outer Banks, NC.

Forecast Track
Historic Track

Population

- < 25,000 persons
- 25,000 - 99,999 persons
- 100,000 - 174,999 persons
- 175,000 - 249,999 persons
- > 250,000 persons

Information provided on this page displays a Category 1 storm making landfall on the Outer Banks, NC. These projections are based on information from the NHC (1100 EDT 08/27/2011) forecast. The numbers of persons included in this model output are those that would be included within estimated hurricane force winds (Census 2000 values adjusted to July 2010 values).

Details about this model may be obtained at http://www.englink.usace.army.mil or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Hurricane Irene Population Model	
Generated By: Siemsen, LRL 1100 EDT 08/27/2011	
Sources: HURREVAC LRL-DEBRIS	Page 15 of 27

US Army Corps of Engineers

Hurricane Irene Population Model

Landfall Plus About 3 Hours

For Planning Purposes Only!

State	Population per State	County	Population per County
Connecticut		Fairfield County	910,000
		Hartford County	842,000
		Litchfield County	181,000
		Middlesex County	166,000
		New Haven County	851,000
		New London County	14,000
		Tolland County	17,000
Connecticut	2,981,000		
Delaware		Kent County	8,000
		Sussex County	169,000
Delaware	177,000		
Maryland		Somerset County	24,000
		Wicomico County	87,000
		Worcester County	49,000
Maryland	160,000		
Massachusetts		Berkshire County	< 1,000
		Hampden County	39,000
Massachusetts	39,000		
New Jersey		Atlantic County	274,000
		Bergen County	896,000
		Burlington County	345,000
		Camden County	169,000
		Cape May County	97,000
		Cumberland County	122,000
		Essex County	778,000
		Gloucester County	74,000
		Hudson County	616,000

State	Population per State	County	Population per County
New Jersey		Mercer County	332,000
(continued)		Middlesex County	796,000
		Monmouth County	647,000
		Morris County	159,000
		Ocean County	578,000
		Passaic County	434,000
		Salem County	7,000
		Somerset County	209,000
		Union County	530,000
New Jersey	7,063,000		
New York		Bronx County	1,392,000
		Dutchess County	45,000
		Kings County	2,547,000
		Nassau County	1,367,000
		New York County	1,615,000
		Orange County	2,000
		Putnam County	95,000
		Queens County	2,355,000
		Richmond County	494,000
		Rockland County	296,000
		Suffolk County	1,497,000
		Westchester County	962,000
New York	12,667,000		
North Carolina		Beaufort County	25,000
		Bertie County	3,000
		Camden County	10,000
		Carteret County	66,000

The number of persons estimated to be within the hurricane force winds comes from Census 2000 values adjusted to July 2010 values.

Details about this model may be obtained at http://www.englink.usace.army.mil
or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Source: US Army Corps of Engineers, All Rights Reserved

Hurricane Irene Population Model

Generated By:
Siemsen, LRL 1100 EDT 08/27/2011

Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane Irene Population Model

Landfall Plus About 3 Hours

For Planning Purposes Only!

State	Population per State	County	Population per County
North Carolina		Chowan County	16,000
(continued)		Craven County	83,000
		Currituck County	25,000
		Dare County	35,000
		Gates County	4,000
		Hyde County	6,000
		Jones County	4,000
		Martin County	2,000
		Onslow County	42,000
		Pamlico County	13,000
		Pasquotank County	42,000
		Perquimans County	13,000
		Tyrrell County	5,000
		Washington County	13,000
North Carolina	407,000		
Pennsylvania		Bucks County	73,000
Pennsylvania	73,000		
Virginia		Accomack County	38,000
		Chesapeake city	226,000
		Hampton city	59,000
		Norfolk city	256,000
		Northampton County	14,000
		Poquoson city	< 1,000
		Portsmouth city	131,000
		Suffolk city	7,000
		Virginia Beach city	436,000
Virginia	1,167,000		

The number of persons estimated to be within the hurricane force winds comes from Census 2000 values adjusted to July 2010 values.

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or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Source: US Army Corps of Engineers, All Rights Reserved

Hurricane Irene Population Model

Generated By:
Siemsen, LRL 1100 EDT 08/27/2011

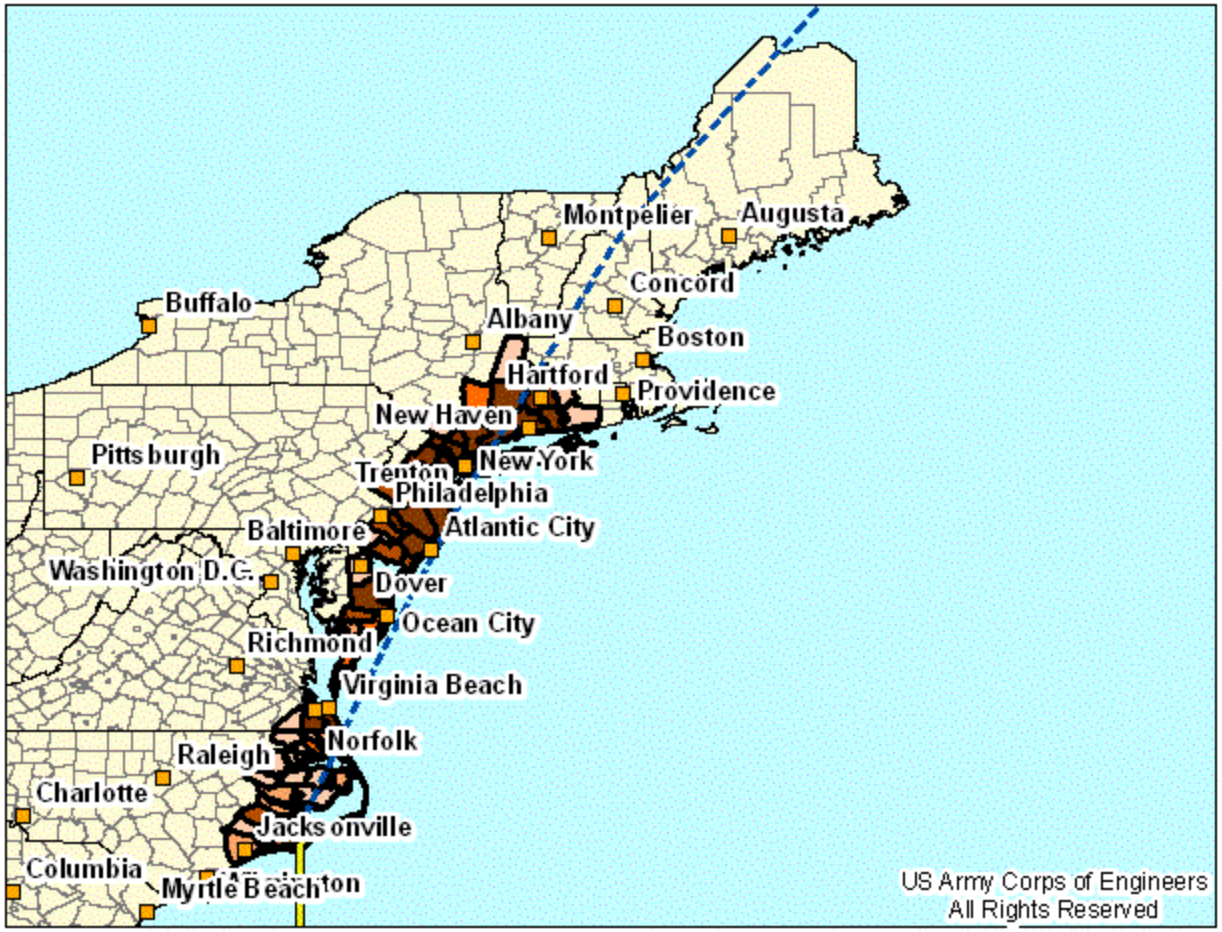
Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane Irene Households Model

Landfall Plus About 3 Hours

For Planning Purposes Only!



Post Landfall Households Model Results

New York - 4,621,000
New Jersey - 2,578,000
Connecticut - 1,145,000
Virginia - 428,000
North Carolina - 158,000
Delaware - 72,000
Maryland - 62,000
Pennsylvania - 28,000
Massachusetts - 15,000

Model results per County on following page

This model is based on a Category 1 storm making landfall on the Outer Banks, NC.

Forecast Track
Historic Track

Households

- < 7,500 households
- 7,500 - 14,999 households
- 15,000 - 24,999 households
- 25,000 - 49,999 households
- > 50000 households

Information provided on this page displays a Category 1 storm making landfall on the Outer Banks, NC. These projections are based on information from the NHC (1100 EDT 08/27/2011) forecast. The numbers of households included in this model output are those that would be included within estimated hurricane force winds (Census 2000 values adjusted to July 2010 values).

Details about this model may be obtained at http://www.englink.usace.army.mil or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Hurricane Irene Households Model	
Generated By: Siemsen, LRL 1100 EDT 08/27/2011	
Sources: HURREVAC LRL-DEBRIS	Page 18 of 27

US Army Corps of Engineers

Hurricane Irene Households Model

Landfall Plus About 3 Hours

For Planning Purposes Only!

State	Households per State	County	Households per County
Connecticut		Fairfield County	335,000
		Hartford County	331,000
		Litchfield County	71,000
		Middlesex County	66,000
		New Haven County	330,000
		New London County	5,000
		Tolland County	7,000
Connecticut	1,145,000		
Delaware		Kent County	4,000
		Sussex County	68,000
Delaware	72,000		
Maryland		Somerset County	8,000
		Wicomico County	33,000
		Worcester County	21,000
Maryland	62,000		
Massachusetts		Berkshire County	< 1,000
		Hampden County	15,000
Massachusetts	15,000		
New Jersey		Atlantic County	103,000
		Bergen County	335,000
		Burlington County	124,000
		Camden County	60,000
		Cape May County	40,000
		Cumberland County	42,000
		Essex County	278,000
		Gloucester County	26,000
		Hudson County	233,000

State	Households per State	County	Households per County
New Jersey		Mercer County	120,000
(continued)		Middlesex County	282,000
		Monmouth County	236,000
		Morris County	59,000
		Ocean County	227,000
		Passaic County	145,000
		Salem County	3,000
		Somerset County	76,000
		Union County	189,000
New Jersey	2,578,000		
New York		Bronx County	485,000
		Dutchess County	16,000
		Kings County	912,000
		Nassau County	459,000
		New York County	776,000
		Orange County	< 1,000
		Putnam County	32,000
		Queens County	827,000
		Richmond County	174,000
		Rockland County	96,000
		Suffolk County	493,000
		Westchester County	351,000
New York	4,621,000		
North Carolina		Beaufort County	11,000
		Bertie County	2,000
		Camden County	4,000
		Carteret County	28,000

The number of households estimated to be within the hurricane force winds comes from Census 2000 values adjusted to July 2010 values.

Details about this model may be obtained at http://www.englink.usace.army.mil
or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Source: US Army Corps of Engineers, All Rights Reserved

Hurricane Irene Households Model

Generated By:
Siemsen, LRL 1100 EDT 08/27/2011

Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane Irene Households Model

Landfall Plus About 3 Hours

For Planning Purposes Only!

State	Households per State	County	Households per County
North Carolina		Chowan County	6,000
(continued)		Craven County	31,000
		Currituck County	10,000
		Dare County	15,000
		Gates County	2,000
		Hyde County	2,000
		Jones County	2,000
		Martin County	< 1,000
		Onslow County	11,000
		Pamlico County	5,000
		Pasquotank County	16,000
		Perquimans County	6,000
		Tyrrell County	2,000
		Washington County	5,000
North Carolina	158,000		
Pennsylvania		Bucks County	28,000
Pennsylvania	28,000		
Virginia		Accomack County	16,000
		Chesapeake city	80,000
		Hampton city	22,000
		Norfolk city	94,000
		Northampton County	6,000
		Poquoson city	< 1,000
		Portsmouth city	48,000
		Suffolk city	3,000
		Virginia Beach city	159,000
Virginia	428,000		

The number of households estimated to be within the hurricane force winds comes from Census 2000 values adjusted to July 2010 values.

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or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Source: US Army Corps of Engineers, All Rights Reserved

Hurricane Irene Households Model

Generated By:
Siemsen, LRL 1100 EDT 08/27/2011

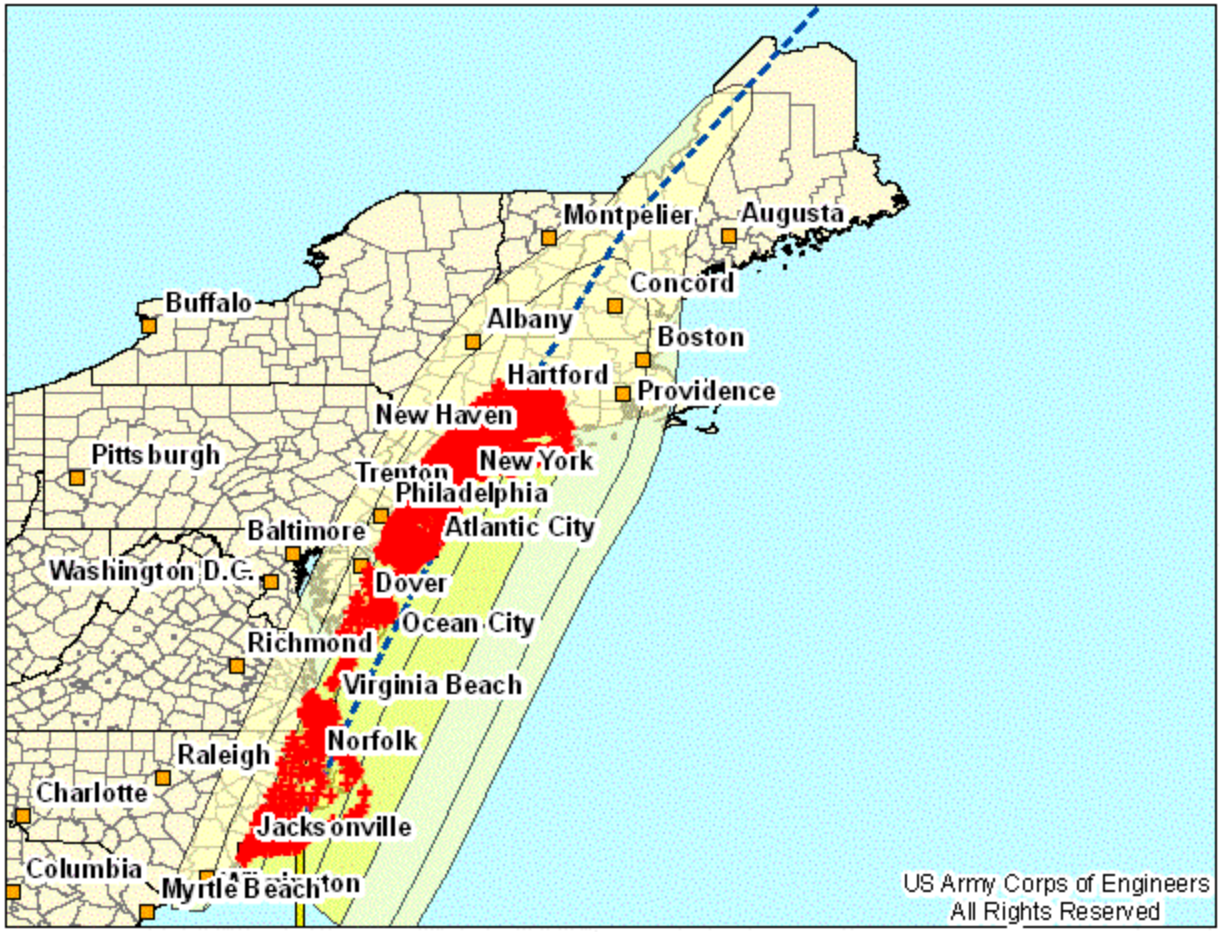
Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane Irene Fire Stations

Landfall Plus About 3 Hours

For Planning Purposes Only!



0 400 800 Miles

Most Probable Landfall Fire Stations Inside Hurricane Force Winds

New Jersey - 943
New York - 830
Connecticut - 451
North Carolina - 170
Virginia - 94
Maryland - 34
Delaware - 29
Pennsylvania - 12
Massachusetts - 6

Model results per County on following page

This model is based on a Category 1 storm making landfall on the Outer Banks, NC.

+ Fire Stations
Forecast Track
Historic Track

Information provided on this page displays a Category 1 storm making landfall on the Outer Banks, NC. These projections are based on information from the NHC (1100 EDT 08/27/2011) forecast.

The number of fire stations included in this output are those that would be included within estimated hurricane force winds (data source: HSIP Gold 2011).

Details about this model may be obtained at http://www.englink.usace.army.mil or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

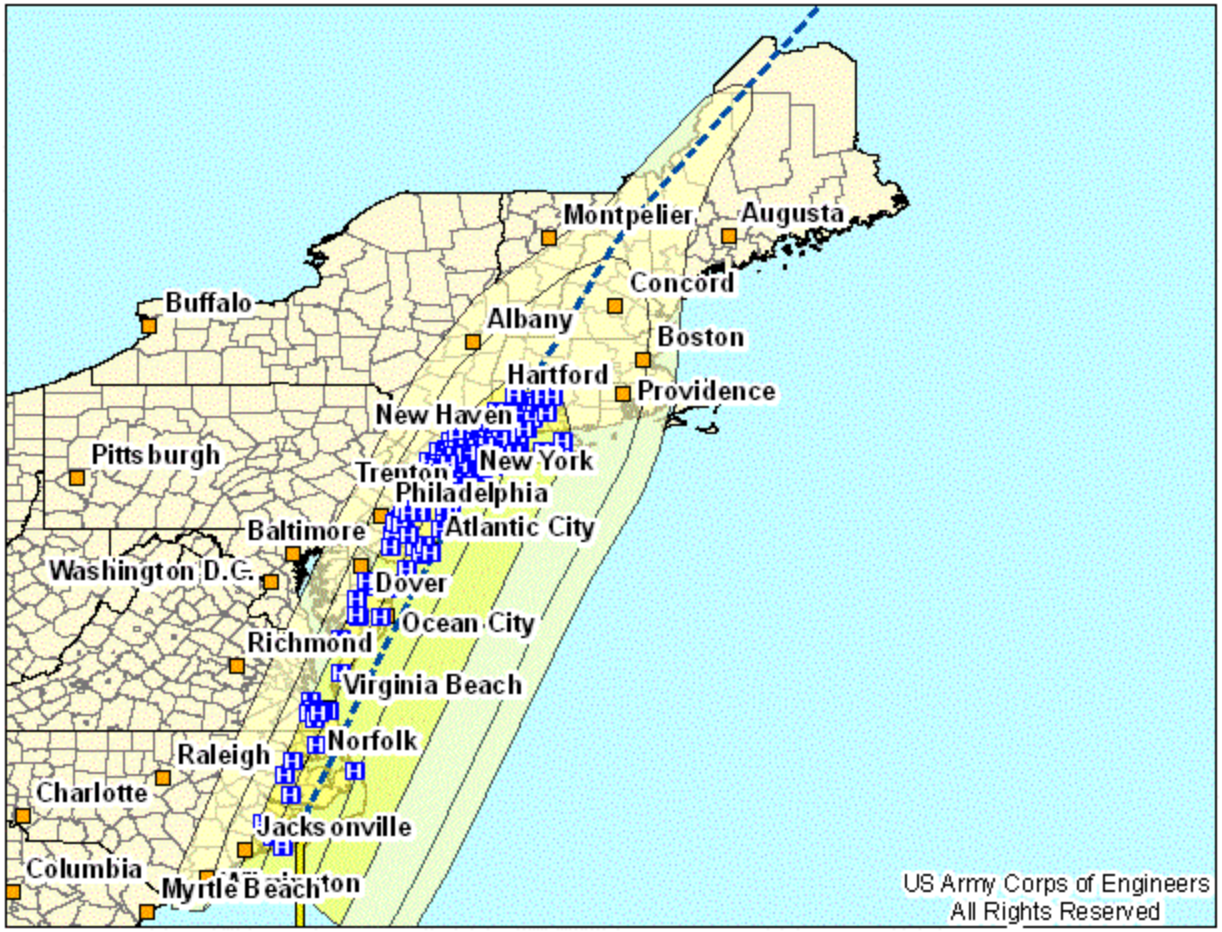
Hurricane Irene Fire Stations	
Generated By: Siemsen, LRL 1100 EDT 08/27/2011	
Sources: HURREVAC LRL-DEBRIS	Page 21 of 27

US Army Corps of Engineers

Hurricane Irene Hospitals

Landfall Plus About 3 Hours

For Planning Purposes Only!



Most Probable Landfall Hospitals Inside Hurricane Force Winds

New Jersey - 114
New York - 109
Connecticut - 37
Virginia - 14
North Carolina - 8
Maryland - 5
Delaware - 4
Massachusetts - 2
Pennsylvania - 1

Model results per County on following page

This model is based on a Category 1 storm making landfall on the Outer Banks, NC.

Hospitals
Forecast Track
Historic Track

Information provided on this page displays a Category 1 storm making landfall on the Outer Banks, NC. These projections are based on information from the NHC (1100 EDT 08/27/2011) forecast.

The number of hospitals included in this output are those that would be included within estimated hurricane force winds (data source: HSIP Gold 2011).

Details about this model may be obtained at http://www.englink.usace.army.mil or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

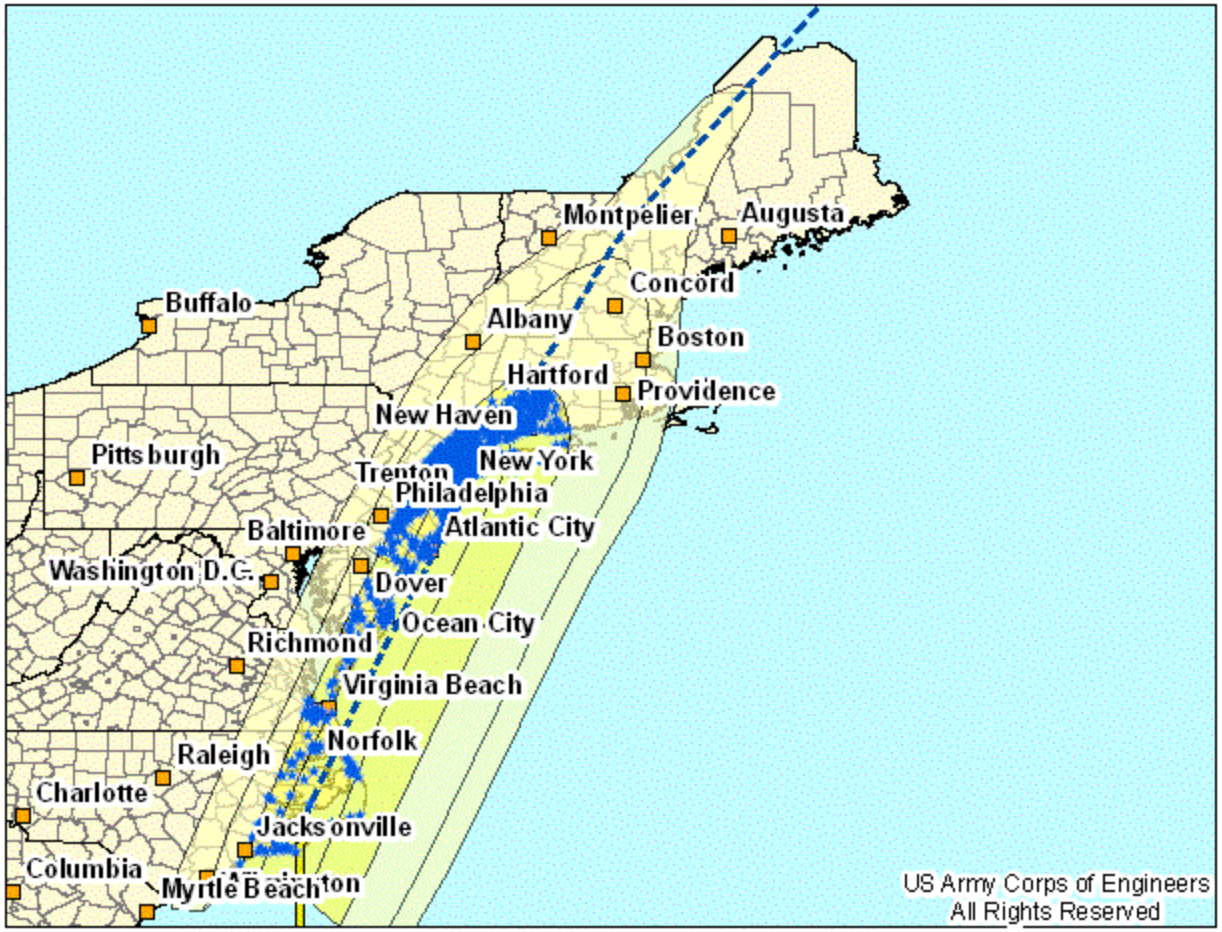
Hurricane Irene Hospitals	
Generated By: Siemsen, LRL 1100 EDT 08/27/2011	
Sources: HURREVAC LRL-DEBRIS	Page 22 of 27

US Army Corps of Engineers

Hurricane Irene Law Enforcement

Landfall Plus About 3 Hours

For Planning Purposes Only!



Most Probable Landfall Law Enforcement Inside Hurricane Force Winds

New Jersey - 462
New York - 405
Connecticut - 155
North Carolina - 76
Virginia - 50
Maryland - 31
Delaware - 19
Massachusetts - 7
Pennsylvania - 3

Model results per County on following page

This model is based on a Category 1 storm making landfall on the Outer Banks, NC.

- Law Enforcement
- Forecast Track
- Historic Track

Information provided on this page displays a Category 1 storm making landfall on the Outer Banks, NC. These projections are based on information from the NHC (1100 EDT 08/27/2011) forecast.

The number of law enforcement included in this output are those that would be included within estimated hurricane force winds (data source: HSIP Gold 2011).

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Hurricane Irene Law Enforcement	
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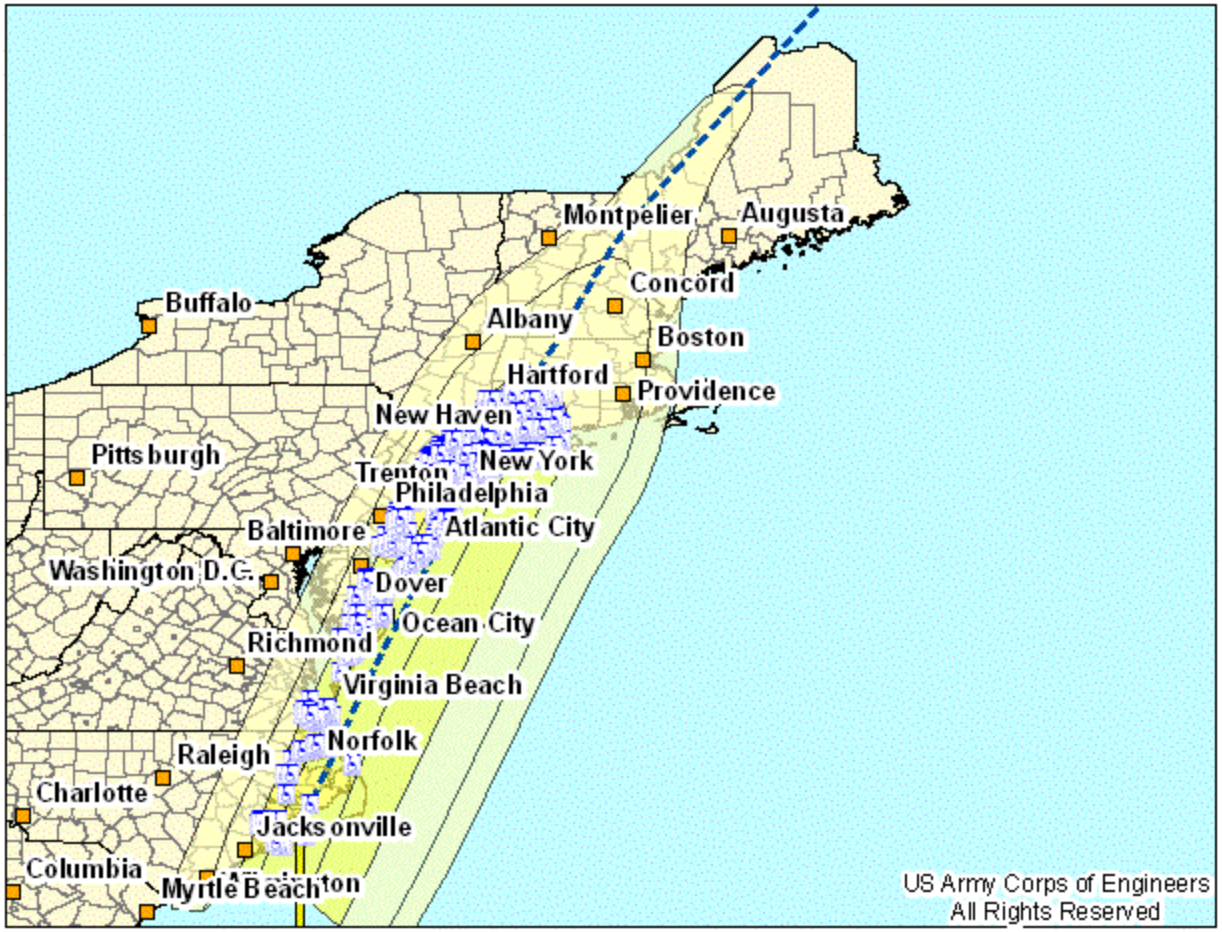
Sources: HURREVAC LRL-DEBRIS	Page 23 of 27

US Army Corps of Engineers

Hurricane Irene Nursing Homes

Landfall Plus About 3 Hours

For Planning Purposes Only!



Most Probable Landfall Nursing Homes Inside Hurricane Force Winds

New York - 474
New Jersey - 433
Connecticut - 348
Virginia - 90
North Carolina - 44
Delaware - 20
Maryland - 19
Massachusetts - 5
Pennsylvania - 2

Model results per County on following page

This model is based on a Category 1 storm making landfall on the Outer Banks, NC.

Nursing Homes
Forecast Track
Historic Track

Information provided on this page displays a Category 1 storm making landfall on the Outer Banks, NC. These projections are based on information from the NHC (1100 EDT 08/27/2011) forecast.

The number of nursing homes included in this output are those that would be included within estimated hurricane force winds (data source: HSIP Gold 2011).

Details about this model may be obtained at http://www.englink.usace.army.mil or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Hurricane Irene Nursing Homes	
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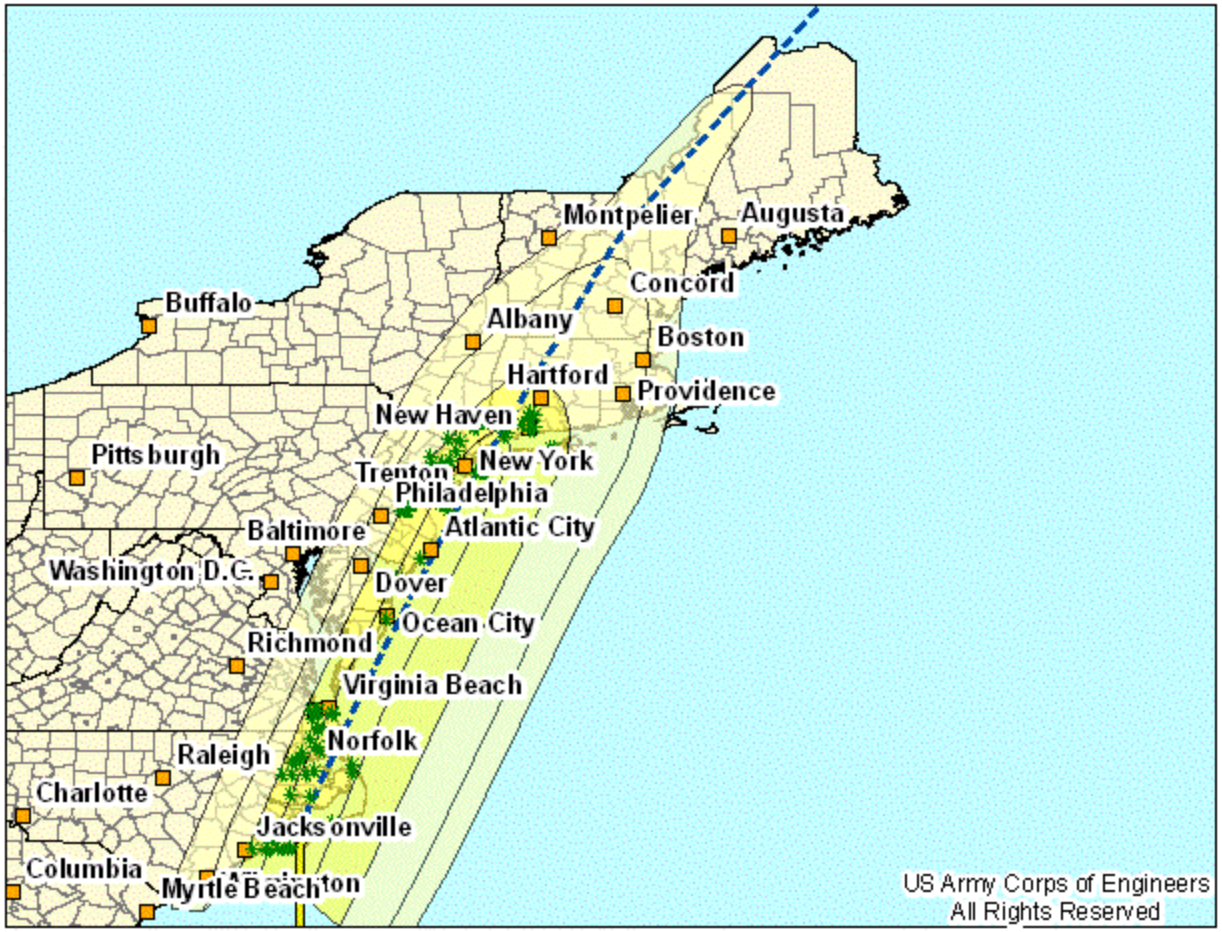
Sources: HURREVAC LRL-DEBRIS	Page 24 of 27

US Army Corps of Engineers

Hurricane Irene Potable Water

Landfall Plus About 3 Hours

For Planning Purposes Only!



Most Probable Landfall Potable Water Inside Hurricane Force Winds

North Carolina - 31
New Jersey - 23
New York - 17
Virginia - 11
Connecticut - 10
Maryland - 1
Massachusetts - 1

Model results per County on following page

This model is based on a Category 1 storm making landfall on the Outer Banks, NC.

* Potable Water
Forecast Track
Historic Track

Information provided on this page displays a Category 1 storm making landfall on the Outer Banks, NC. These projections are based on information from the NHC (1100 EDT 08/27/2011) forecast.

The number of potable water included in this output are those that would be included within estimated hurricane force winds (data source: HSIP Gold 2011).

Details about this model may be obtained at http://www.englink.usace.army.mil or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Hurricane Irene Potable Water	
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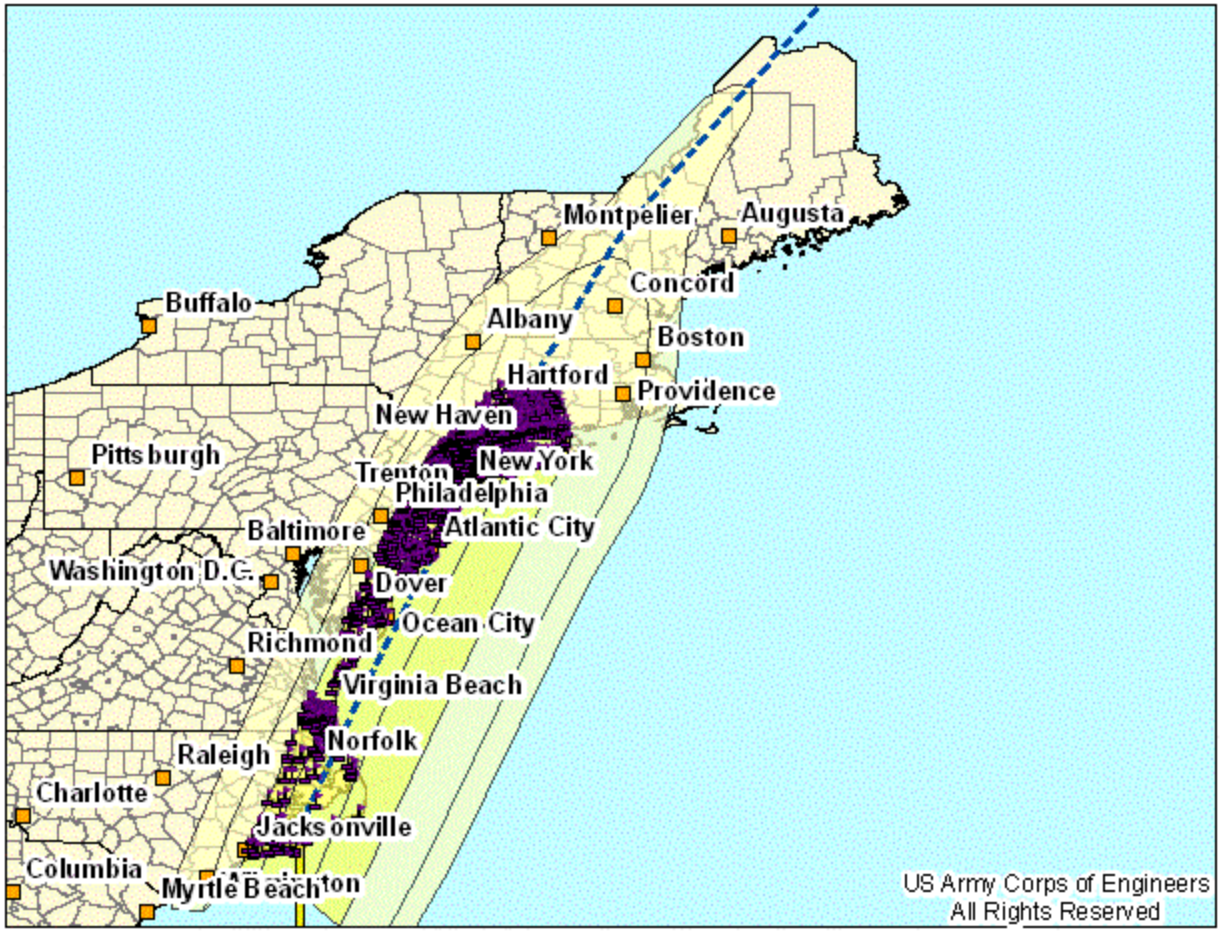
Sources: HURREVAC LRL-DEBRIS	Page 25 of 27

US Army Corps of Engineers

Hurricane Irene Schools

Landfall Plus About 3 Hours

For Planning Purposes Only!



Most Probable Landfall Schools Inside Hurricane Force Winds

New York - 2,560
New Jersey - 2,024
Connecticut - 927
Virginia - 285
North Carolina - 118
Delaware - 46
Maryland - 44
Pennsylvania - 19
Massachusetts - 13

Model results per County on following page

This model is based on a Category 1 storm making landfall on the Outer Banks, NC.

Schools
Forecast Track
Historic Track

Information provided on this page displays a Category 1 storm making landfall on the Outer Banks, NC. These projections are based on information from the NHC (1100 EDT 08/27/2011) forecast.

The number of schools included in this output are those that would be included within estimated hurricane force winds (data source: HSIP Gold 2011).

Details about this model may be obtained at http://www.englink.usace.army.mil or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

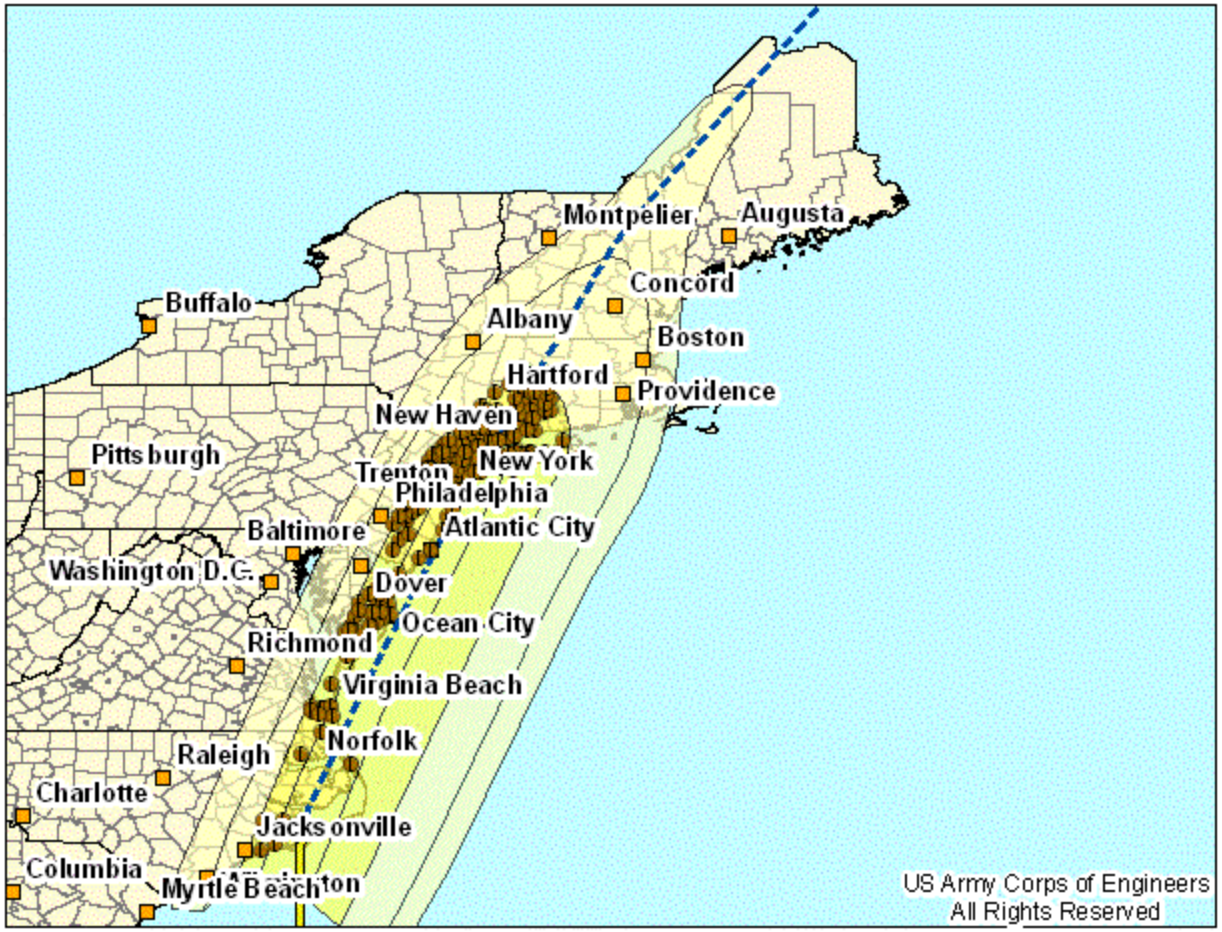
Hurricane Irene Schools	
Generated By: Siemsen, LRL 1100 EDT 08/27/2011	
Sources: HURREVAC LRL-DEBRIS	Page 26 of 27

Hurricane Irene Sewage Treatment Plants

Landfall Plus About 3 Hours

US Army Corps of Engineers

For Planning Purposes Only!



Most Probable Landfall Sewage Treatment Plants Inside Hurricane Force Winds

New Jersey - 114
New York - 87
Connecticut - 64
Maryland - 18
Virginia - 11
Delaware - 9
North Carolina - 8
Pennsylvania - 7
Massachusetts - 1

Model results per County on following page

This model is based on a Category 1 storm making landfall on the Outer Banks, NC.

Sewage Treatment Plants
Forecast Track
Historic Track

Information provided on this page displays a Category 1 storm making landfall on the Outer Banks, NC. These projections are based on information from the NHC (1100 EDT 08/27/2011) forecast.

The number of sewage treatment plants included in this output are those that would be included within estimated hurricane force winds (data source: HSIP Gold 2011).

Details about this model may be obtained at http://www.englink.usace.army.mil or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Hurricane Irene Sewage Treatment Plants	
Generated By: Siemsen, LRL 1100 EDT 08/27/2011	
Sources: HURREVAC LRL-DEBRIS	Page 27 of 27